Energy Efficiency Primer

Successful energy efficiency programs require stable, multi-year funding. The most aggressive states (CT, VT, MA, RI) fund their energy efficiency programs at a rate of 2.3-3.0mills/kWh, while Illinois is currently funding programs at a rate of 0.03mills/kWh. Another way to look at funding levels is as a percentage of utility revenue. This ranges from Illinois at the bottom with a rate of 0.02% to Vermont with a rate of 3.3%.

Energy Efficiency is the first most basic step to:

- **Avoid building more power plants or delay the need to build**
  - In the Northwest, between 1982 and 2002, conservation met ¼ of the region's load growth or approximately 2600 average MW
  - This is roughly equivalent to the amount of energy consumed by the State of Idaho for one year.
- **Reduce current energy usage to better manage load**
  - In California, PG&E and the other investor-owned utilities are required to invest in energy efficiency first, then demand reduction, then renewable sources (for meeting load), and only after that are allowed to consider new supply in the form of traditional power plants. In this way, the utilities use energy efficiency programs to manage their load growth.
- **Help alleviate transmission and distribution issues, thus increasing reliability of the grid**
  - New York achieves 570 MW peak reductions per year through energy efficiency programs. Reducing and shifting peak loads helps increase the reliability of the electric grid and avoids costly brown and black outs.
- **Reduce the introduction of pollutants into the environment**
  - Each 1 MWh saved results in annual reductions of[1]:
    - 2.2 million lbs of CO_2
    - 5,800 lbs of NOx
    - 11,200 lbs of SO_2
    - These savings translate to taking 161 cars off the road
    - Thus helping the 12 Illinois counties currently in violation of the 8-hour ozone rules to meet these air quality requirements.
- **Create better-informed, more aware and empowered consumers**
  - Understanding of the Energy Star label is higher (69% vs. 61%) in areas with sustained promotions and publicity such as those achieved through energy efficiency programs.[2]
  - Consumers, in areas with sustained publicity have a higher degree of understanding of Energy Star and are more likely to knowingly purchase Energy Star appliances.
- **Help to revitalize the economy by investing in manufacturing of energy efficient products and energy efficiency services**
  - Based on a 2001 analysis, an aggressive energy efficiency policy in Illinois can generate 25,900 new jobs by 2010 and 43,400 new jobs by 2020.[3]
  - For every $80,000 in energy saved by efficiency programs, roughly one new job is created.

[1] Over the lifetime of the product

[2] Source: CEE, *National Awareness of Energy Star for 2003*, Goldberg, Goepfrich, Spielman, 2003.

[3] Source: ELPC, *Job Jolt: The Economic Impacts of Repowering the Midwest*, Hewings, Yanai, et.al., 2002